

I Claim:

1. A method for contact-connecting an electrical component on a substrate having a conductor structure, which comprises the steps of:

introducing a bonding agent between the electrical component and the conductor structure of the substrate, the bonding agent having a melting point being at a temperature at which the substrate is not damaged; and

producing a permanent electrically conductive connection by melting the bonding agent and the bonding agent subsequently solidifying by the steps of:

increasing a joining temperature above a glass transition temperature of the substrate; and

exerting a pressure on the electrical component resulting in the substrate experiencing a plastic deformation and the electrical component being pressed together with the conductor structure into the substrate in a positively locking manner, and the bonding agent being brought to solidification before the plastic deformation of the substrate takes place.

2. The method according to claim 1, which further comprises:

forming the conductor structure with at least one conductor track and at least one contact point; and

introducing the bonding agent between a contact of the electrical component and the contact point of the conductor track.

3. The method according to claim 1, which further comprises forming the substrate from a soft material having a melting point below 120° C.

4. The method according to claim 3, which further comprises forming the substrate from a material selected from the group consisting of PVC and PET.

5. The method according to claim 1, which further comprises forming the bonding agent from a solder material made of at least two different elementary metals or semiconductor materials.

6. The method according to claim 5, which further comprises forming the solder material from bismuth.

7. The method according to claim 5, which further comprises forming the solder material from a composition containing

bismuth and indium, a composition containing bismuth and tin, or a composition containing indium and tin.

8. The method according to claim 7, which further comprises forming the solder material from an intermetallic compound, a phase of a composition of BiIn, or a phase of a composition of BiIn₂.

9. The method according to claim 1, which further comprises using a thermoplastic adhesive as the bonding agent.

10. The method according to claim 1, which further comprises heating the electrical component and the substrate with a laser operating in an infrared region, which acts through the substrate in a direction of the electrical component.

11. The method according to claim 1, which further comprises providing a semiconductor component as the electrical component.

12. A method for contact-connecting an electrical component on a substrate having a conductor structure, which comprises the steps of:

introducing a bonding agent between the electrical component and the conductor structure of the substrate, the bonding

agent having a melting point being at a temperature at which the substrate is not damaged;

heating the electrical component, the substrate and the bonding agent to a joining temperature above a glass transition temperature of the substrate for melting the bonding agent; and

exerting a pressure on the electrical component, during which time the bonding agent solidifies, and heat being transferred to the substrate from at least the bonding agent resulting in the substrate experiencing a plastic deformation and the electrical component being pressed together with the conductor structure into the substrate in a positively locking manner for forming a permanent electrical conductive connection.